

## **TITLE OF THE INVENTION**

### **DENTAL INSURANCE ELIGIBILITY DETERMINATION AND UTILIZATION RECORDATION SYSTEM**

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#### **BACKGROUND OF THE INVENTION**

##### **1. Field of the Invention**

The invention is directed to systems for use by insurance carriers, plans and dental care providers pertaining to verification of benefits, eligibility of participants and the entry and recordation of utilization of benefits, and more particularly a system which furnishes dental insurance carriers and plans with information pertaining to the eligibility of any members, and, which facilitates the entry of the utilization of benefits.

##### **2. Background Art**

Dentists (or other professionals) have had a need to determine the insurance coverage and benefits of patients that they treat. Generally, to accurately establish the effective date and type of insurance coverage of a patient (or participant), a dentist's office is required to contact a carrier or plan. Often times, these telephone calls are exceedingly time consuming. Moreover, the telephone call is verbal and does not include a written record. Thus, it is often possible to have a miscommunication and a misunderstanding between the dentist's office and the insurance carrier.

In other situations, the dentist may rely on information which is provided on the insurance card (or other insurance identification) or list sent by a carrier or plan of the patient/participant or on other information in the dentist's files. With frequent changes in coverage, abbreviated or outdated instructions on the card and outdated information in the dentist's files, reliance on information that is in the dentist's immediate possession can often prove erroneous. Thus, not only is the patient not properly charged, but additional costs are incurred and additional time is lost by both the dentist's office and the insurance carrier to correct the problem.

In addition, dental professionals must currently proceed through excessively form intensive and laborious procedures to notify insurance companies/providers of the utilization of benefits by patients/participants.

Thus, it is an object of the invention to provide dental professionals with the current, updated,



## SUMMARY OF THE INVENTION

5 The invention comprises a system for determining eligibility by a dental care provider for determining plan design by a dental care provider and for recording utilization of benefits by a care provider, plan design and patient/participant copayment level, if any. The system comprises at least one computer having at least one data storage means, at least one input means, and at least one output means. Each such at least one computer includes participant data stored on the data storage means pertaining to a participant. The invention further includes means associated with the at least one computer for determining eligibility of the participant and means associated with the at least one computer for recording utilization of benefits by the dental care provider.

10 In a preferred embodiment, the at least one computer comprises a plurality of computers being linked to define a network. In such an embodiment, the plurality of computers are linked by way of the world wide web.

15 In another preferred embodiment, the eligibility determining means comprises means for inputting a participant identifier; means for inputting a particular procedure necessitated by a participant; means for searching the participant data stored in the at least one data storage means for the participants identifier; and means for providing the participant's stored data pertaining to the participant identifier to the output means of the at least one computer. As such, data can be provided as to the eligibility of a participant for a particular procedure.

20 In another preferred embodiment, the participant identifier comprises at least one of the group consisting of: social security number, last name, first name, carrier and date of birth.

In another preferred embodiment, the means for inputting a particular procedure necessitated by a participant comprises means for inputting at least a procedure code, a tooth identification, and a tooth positional identification (where applicable).

25 In yet another preferred embodiment, the benefit utilization recording means comprises means for creating a utilization record. In such an embodiment, the benefit utilization recording means comprises means for accessing at least one created utilization record. In another such preferred embodiment, the utilization record includes an identification of the dental care provider, an identification of the participant, and the identification of the procedure necessitated by the

participant.

In another preferred embodiment, the invention further includes means for selecting the operation of one of the verification means and the benefits utilization recording means. In another preferred embodiment, the invention further includes means for verifying access, thereby permitting only a select group of predetermined operators to utilize the system.

Preferably, the invention further includes means for updating the participant data stored on the data storage means of at least one of the computers of the system.

The invention further includes a method for providing information to dental care providers regarding a participant comprising the steps of: (a) determining eligibility of the participant; and (b) recording utilization of benefits by way of a procedure by the dental care provider. The step of determining the eligibility of the participant comprises the steps of: (a) inputting an identifier data pertaining to at least one participant as input; (b) searching for the identifier data in said participant data of a data storage means; and (c) providing output in the form of data pertaining to the eligibility of the at least one participant. The step of recording utilization of benefits comprises the steps of: (a) inputting an identifier data pertaining to at least one participant as input; and (b) inputting a preformed procedure data.

In a preferred embodiment, the method further comprises the step of: accessing the inputted performed procedure data in real time. In another preferred embodiment, the method further comprises the step of: updating at least a portion of the data pertaining to the eligibility of the at least one participant, wherein, the step of providing output of such data occurs in real time.

In yet another preferred embodiment, the step of inputting an identifier comprises the step of: inputting at least one of a social security number, a last name, a first name and a date of birth. In another preferred embodiment, the step of inputting data pertaining to a procedure comprises the step of: inputting at least one procedure code pertaining to a desired procedure. In yet another preferred embodiment, the step of inputting data pertaining to a procedure comprises the steps of: (a) inputting at least one procedure code pertaining to a desired dental procedure; (b) inputting an identification of the tooth undergoing the desired dental procedure; and (c) inputting the identification of the location of the tooth undergoing the desired dental procedure.

The invention further comprises a method for establishing a network for the administration

of coverage to a dental care provider. The method comprises the steps of: (a) providing a plurality of computers; (b) linking the computers to form a network; (c) storing data pertaining to a participant and to a coverage plan pertaining to the participant; and (d) providing access to the data of the participant from at least one of the plurality of computers, to in turn, facilitate at least one of: (i) 5 determining the eligibility of the participant for a particular procedure; and (ii) recording the utilization of participant benefits by the dental care provider to form utilization records.

In a preferred embodiment, the method further includes the step of updating the data so as to provide accurate data in real time. In another preferred embodiment, the step of linking the computers comprises the step of linking the computers by way of the world wide web.

10 In another preferred embodiment, the method further comprises the step of requiring a login prior to providing access to the data of the participant, to, in turn, maintain the security of the data.

In another preferred embodiment, the step of providing access further includes the step of providing access to facilitate access to completed utilization records.

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Fig. 2 of the drawings is a schematic representation of the network upon which the system operates.

## DETAILED DESCRIPTION OF THE INVENTION

While this invention is susceptible of embodiment in many different forms, there is shown herein in the drawings and will be described in detail a specific embodiment, with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the invention to the embodiment illustrated.

System 10 for determining eligibility by a dental care provider for determining plan design by a dental care provider and for recording utilization by a dental care provider is shown schematically, in its operating phase, in Fig. 2 of the drawings. It is preferred that system 10 is a world wide web based networked system of computers. In particular, server 90 is associated with world wide web 98, and includes a particular domain address. Thus, any other computers 95 (clients) having access to the world wide web can access the computer. Each such computer includes input means 60, output means 62, data storage 64 means and processor means 66. For example, any of the servers and clients may comprise Pentium based computers or other compatible processor based computers (such as the Celeron, Cyrix, AMD or earlier processor equipped computers), RISC based computers (such as those from Sun Microsystems) or Macintosh computers, running various operating systems (ie. Windows 95, Windows 98/NT, OS2, Macintosh OS, or UNIX). Such computers will also include keyboards, mice, tablets, NICS, modems and the like for receiving instructions; video screens, audio, modems and NICS for delivering output; and hard drives and various removable media for the storage of data.

It will be understood that the system is however not limited to interfacing through the world wide web, and, instead the system may comprise a single computer having the information therewithin or available in disk or CD-ROM form, or the system may comprise several computers which are connected so as to form an intranet via a LAN or WAN. In sum, while the invention will be described in a server/client environment wherein communication is maintained over the world wide web, the invention is not limited to a particular quantity of computers and the particular configuration of the communication interface between computers.

The server and/or client in such a system includes a software package, as shown in Figs. 1 and 2, which includes means 20 (Fig. 1) for identifying eligibility of participant subscribers, means 30 (Fig. 1) for recording utilization for a patient, means 40 for updating the system, means 50 for

accessing the utilization information and means 65 for tracking use of the system. In this embodiment, the software package is in server 90 and clients 95 utilize a web browser such as Netscape Navigator or Microsoft Internet Explorer. To access these means from the client computer, the operator is first prompted by a verification means 55 to login by way of entering a user ID and a password. Once entered and accepted, the user can proceed to utilize the appropriate desired features identified below. By using such a restricted access procedure through verification means 55, the system can not only limit the information to the subscribers of the system, but can also be tailored so as to provide different information to different users and different types of users. For example, certain users can access the update means. A different set of users may have access to the participant eligibility determining means. Among the set of users that have access to the participant eligibility means, certain ones may have access to different aspects thereof.

Participant eligibility determining means 20 essentially comprises a machine programmable software package which performs the following functions and operations: providing information pertaining to a participant/patient that is covered by a carrier, and providing information pertaining to the participant as it relates to a particular contemplated dental procedure. Various means within the eligibility means perform these functions.

The operation of the eligibility determining means is initiated by an operator requesting information pertaining to a subscriber or individual that is to obtain treatment from the dental care provider. As shown in Fig. 1, as first step 71 the user first enters any one or more of the following: an insurance member number; a carrier identification; last name; first name; date of birth; social security number or other means of identification. Once entered, a software search of participant data files on server 90 is undertaken to find a match. If no match is found, the operator is alerted by the system, through alert step 74, that no information is available for the subscriber. In such a situation, the operator is advised that the individual may not have dental insurance coverage, and that the individual is therefore personally responsible for payment of the services.

On the other hand, if the participant identification is found within the participant data files, the operator is provided with information through step 72 pertaining to the subscriber. Such information can include, but is not limited to, the social security number of the individual, the first and last name of the individual, the date of birth of the individual, the member number of the



individual, the carrier number of the insurance carrier of the individual, the effective date of coverage, the term of coverage dates, the coverage levels for the individual and the assigned dental care provider if it is a provider network based plan. Inasmuch as the operator has logged onto the system through verification means 55, and the system is aware of the particular operator that is requesting the information, the information provided by the system can be tailored to the predetermined and known needs or preferences for that particular operator. For example, where the dental care operator or provider, comprises an oral surgeon, the system can be tailored so as to disclose the coverage of the individual for only those services which the oral surgeon performs. Thus, the operator will not be flooded with information from the participant data that is not required.

As shown in Fig. 1, once the information is received, the operator can enter the requested or the desired procedure that is to be done by the dental care provider, by way of step 75. (In the contemplated dental environment, the operator can enter any number of procedures up to ten procedures). For each procedure, the operator enters the procedure code (a set of procedure codes can be made available on a separate screen, a pulldown menu or in a user manual), the tooth identification number and the surface of the tooth that is treated, if applicable. It will be understood that while the software in this embodiment can accept ten procedures at once, different embodiments may accept a greater or a fewer number of procedures. In addition, in different dental environments, the information that the operator enters regarding the particular procedures that are to be undertaken may be different and suited to that particular environment. Moreover, the particular input sequence is not limited to that disclosed. Rather, any input sequence which identifies to the system with particularity the dental procedure that is to be done, may be utilized.

Once the information is entered, the system can respond to the operator, by way of step 73 (Fig. 1), by validating the subscriber information and the input procedure information. For example, the operator can be told that the information is correct, then the operator can print the information or save it electronically on the computer. If the system determines that the information provided by the operator is not in order, the system issues an error, and then the operator can review the information and make corrections where required. If a problem persists, the operator can print the error messages for later error correction or clarification. As such, if the information is incorrect, the operator can proceed to other tasks, and can leave the problematic entries or tasks for later solution.

Indeed, even if a telephone call to the carrier is required for these problematic entries, the total time saved by the direct determination still results in considerable savings.

As the user completes the eligibility determination for each patient or individual, the user can prompt the system to receive new subscriber information through the eligibility determination means.

Alternatively, the user can exit the system. This may all be by way of menu step 77 (Fig. 1).

Benefits utilization means 30 comprises a set of software instructions which, like the identification means, may be accessed by an operator after logging into the system. Indeed, as explained above, once logged in, the user is capable of accessing the benefits utilization means to the extent permitted by the administration of the system.

The utilization means, as shown in Fig. 1, comprises software which is initiated by step 81, by requesting subscriber information (such as the subscriber number), the particular carrier for the participant and the number of dental procedures that have been completed by the dental care provider to the participant. Once this information is entered, by way of step 82, the system verifies the subscriber number of the participant and returns to the user information pertaining to the participant, such as the social security number, the first and last names, the carrier number and the date of birth so that the operator can verify that the correct participant has been selected by the system. Once the operator verifies this information, also by way of step 82, the operator enters the particular medical procedures into the system which were performed by the dental care provider. Procedure related information for an embodiment of the invention pertaining to the dental environment, may comprise the procedure code (as explained above the procedure code can be provided by the system in, for example, a pull-down menu, or by documentation associated with the system), the tooth that required the procedure, the surface of the tooth that required the procedure, the service date and the fee that was charged.

Once the information is complete for each procedure, the operator, through steps 82 and 83, can post the information. In particular, the posting of the information transmits the information to the system, and in turn, with this information the system can create a utilization record 83 which will include, but not be limited to, the following information: dental care provider number and name, the dentist number and name (this information can be obtained from the user login), the subscriber number and full name, the carrier number, the social security number of the subscriber, the date of

birth of the subscriber, the procedure code, tooth, surface, procedure description, service date and fee for each procedure that was entered by the operator for the subscriber. In addition, if any errors are identified by the system, such errors can likewise be identified on the utilization record.

As shown in Fig. 2, by using access means 40 which is another segment of the system, the dental care carriers from client 95 or from server 90, and others who require the utilization records can likewise login to the system and obtain the utilization records pertaining to subscribers that belong or that are carried by the carrier or the plan. For example, the utilization records may be utilized by the carriers with the plan to direct benefits payments to the dental care providers. The utilization records available to a particular carrier through the access means may be limited by the login/password procedure.

<sup>sub</sup> Means 50 for updating the system as shown in Fig. 2, is a segment of the system which is accessed by administrators of the system through a client 95 or directly through server 90. The updating means provides the capability to update information pertaining to the identification of the subscribers, the identification of the carriers, the identification of the effective date of coverage, the term of coverage and the level of coverage for any subscriber. This information may be updated by a specific administrator of the system. In addition, it is likewise contemplated that the system may be updated by individual carriers or plans who are given access to the updating means. For example, it is contemplated that each carrier can access to the updating means of the system, and can transmit to the system any changes in information pertaining to their participants as soon as such changes are implemented by the carrier. Thus, the updating means operates on a 24 hour basis, and permits continuous updating of the data stored in the system. As a result, throughout the operation of the system, the operator is provided with accurate, dependable information pertaining to a subscriber on a real-time basis.

The system includes means 65 for tracking the use and access of the system by carriers and dental care plans. For example, the tracking means may comprise a subscription based system wherein the carriers and plans pay a flat fee or a per patient fee to subscribe to and to have access to the system. Thus, a means is provided for the generation of income by the administrator of the system.

In sum, through the use of the above-described system, the participating dental care provider

is given an apparatus and a method for determining the eligibility of subscribers (even in DHMO type plans), determining the overall success in operation of design of the plan, and determining the participant's benefits including patient co-payments. Thus, the patients can more easily obtain appropriate dental services and errors in billing and co-payment can be minimized. In addition, since the information is continuously updated, the information received by the system operator at the dental care provider comprises accurate and up to the minute information. Thus, the invention places this information, in real time, which has been previously available to the dental care provider only through a telephone call with the carrier, at the immediate computer access of the operator, as long as the operator has access to the world wide web and the appropriate login information.

The foregoing description and drawings merely explain and illustrate the invention and the invention is not limited thereto except insofar as the appended claims are so limited, as those skilled in the art who have the disclosure before them will be able to make modifications and variations therein without departing from the scope of the invention.